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EXAMINER

TRAN, THAO T

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 04/22/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/023,197

Applicant(s)

TAYLOR ET AL.

Examiner

Thao T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 25-118 is/are pending in the application.
- 4a) Of the above claim(s) 25-33, 41, 48-50, 57, 58, 73, 78, 83 and 95-98 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-40, 42-47, 51-56, 59-72, 74-77, 79-82, 84-94 and 99-118 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 25-33, 41, 48-50, 57-58, 73, 78, 83, 95-98, drawn to an electro-kinetic air transporter-conditioner system, classified in class 422, subclass 186.
  - II. Claims 34-40, 42-47, 51-56, 59-72, 74-77, 79-82, 84-94, 99-118, drawn to an electro-kinetic air transporter-conditioner system, classified in class 422, subclass 186.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, Invention I is directed to an electro-kinetic air transporter-conditioner system that comprises a housing having a back air inlet vent, and three outlet vents which are at the right, left, and front sides respectively. Invention II is directed to an electro-kinetic air transporter-conditioner system that comprises a housing having an air inlet vent and an air outlet vent. Since Invention I has three different outlets whereas Invention II has one, the Inventions are different from each other. If Applicants think that these are the same, please provide an explanation as to why they are the same invention.
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Sheldon Meyer on April 09, 2003 a provisional election was made without traverse to prosecute the invention of Group II, claims 34-40, 42-47, 51-56, 59-72, 74-77, 79-82, 84-94, 99-118. Affirmation of this election must be made by applicant in replying to this Office action. Claims 25-33, 41, 48-50, 57-58, 73, 78, 83, 95-98 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Claim Objections***

7. Claim 62 is objected to because of the following informalities: line 2, "use-liftable handle" should be changed to --user-liftable handle--. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claims 35, 51, 53, 54, 59-72, 76, 81-82, 86-94, and 107-118 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 35 is indefinite due to the use of "said electrodes". It is unclear to the examiner whether Applicants mean to indicate the first, second, or both electrodes. Clarification of "said electrodes" is required.

Claims 51, 54, 59, 61-72, 88, 90-93 are indefinite due to the use of "removable ... electrode" and "liftable ... handle". The words "removable" and "liftable" do not give a positive description of the electrode or the handle, since they indicate that the electrode may or may not be removed and the handle may or may not be lifted. Clarification on the structures of the electrode and the handle is required.

### ***Double Patenting***

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 34-40, 42-47, 51-56, 59-72, 74-77, 79-82, 84-94, 99-118 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

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claims 47-62 of Co-pending Application, Serial No. 09/730,499. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims contain the subject matter that is broader in scope than that of the claims of the Co-pending Application, rendering them obvious over each other.

The claims of the Co-pending Application teach all the limitations recited in the instant claims.

However, independent claim 47 of the Co-pending Application contains a wire-shaped ion emitting electrode located proximate to the inlet vent; a hollow "U"-shaped particle collecting electrode located closer to the outlet vent; and a high voltage generator electrically connected to the electrodes; in addition to the other limitations as recited in independent claims of the instant application. Therefore, the scope of claim 47 of the Co-pending Application is narrower than that of the instant claims, rendering them obvious over each other.

Similarly, the scope of independent claims 51, 56 of the Co-pending Application is broader than that of the instant claims. And the scope of the independent claim 60 of the Co-pending Application is narrower than that of the instant claims, rendering them obvious over each other.

12. Claims 34-40, 42-47, 51-56, 59-72, 74-77, 79-82, 84-94, 99-118 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,176,977. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the claims in the patent is narrower than that in the instant claims, rendering them obvious over each other.

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Claims 1 and 12 of the patent teach a housing, in which disposed an ion generator; the ion generator includes a high voltage generator, a first electrode array, and a second electrode array, wherein the second electrode array is removable from the housing; in addition to other limitations. Therefore, the scope of the instant claims is broader and hence embraces that of the claims of the patent, making them obvious over each other.

13. Claims 34-40, 42-47, 51-56, 59-72, 74-77, 79-82, 84-94, 99-118 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11, 16-19 of U.S. Patent No. 6,350,417. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the claims in the patent is narrower than that in the instant claims, rendering them obvious over each other.

Claims 1 and 16 of the patent teach a housing, in which disposed an ion generator; the ion generator includes a high voltage generator, a first electrode array, and a second electrode array, wherein the second electrode array is removable from the housing; in addition to other limitations. Therefore, the scope of the instant claims is broader and hence embraces that of the claims of the patent, making them obvious over each other.

### ***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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15. Claims 34-40, 44-47, 51-56, 59-72, 74-77, 88-93, and 99-118 are rejected under 35

U.S.C. 102(e) as being anticipated by Taylor et al. (US Pat. 5,975,090).

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Taylor teaches a system, comprising an elongated housing (body) having an air inlet vent 130 and an air outlet vent 150; an ion generating unit 160, disposed inside the housing; the ion generating unit having a high voltage pulse generator unit 170, coupled to an electrode assembly 220 that comprises wire electrodes 232 and U-shaped electrodes 242. Electrodes 232 are ion emitting electrodes and electrodes 242 are collector electrodes; wherein the ion emitter electrodes are located adjacent to the air inlet vent, and the collector electrodes adjacent the outlet vent (see Figs. 1-4; col. 3, ln. 27-35; col. 7, ln. 1-8).

In regards to claims 51-56, 59-62, 65-69, 72, 88, Taylor further teaches the system having a top portion, wherein a user control S1 is located; and a handle B1 (see Fig. 2B). With respect to the collector electrode being removable and the handle being liftable, applicants are reminded that the words "removable" and "liftable" do not positively recite the limitations. Furthermore, it has been within the skill in the art that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. See *MPEP 2114*.

In regards to claims 99-118, Taylor teaches the system comprising a control S1 that can cause the system to energize, can control the duty cycle of the ion generating unit, and can



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control a pulse mode operation (see Fig. 3); wherein the pulse mode control (unit 170) can initiate a burst of output ozone (see col. 5, ln. 18-32).

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 59, 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams (US Pat. 4,253,852).

Adams teaches an air purifier, comprising an elongated and upstanding housing 2, having a top surface, an inlet 20 and an outlet 22; and an ion generating unit positioned in the housing; the ion generating unit includes a first electrode 12, a second electrode 14; wherein the first electrode is closer to the inlet and the second electrode to the outlet (see Figs. 1-3; col. 3, ln. 36 to col. 4, ln. 20).

With respect to the second electrode being removable or how it is removable, Applicants are reminded that the word “removable” does not positively recite the limitation following, therefore the limitation would have no significant patentable weight. Moreover, it has been within the skill in the art that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. See *MPEP 2114*.

18. Claims 59, 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Anzai (US Pat. 4,772,297).

Anzai teaches an air cleaner, comprising an upstanding, elongated housing A having a top surface, an inlet B1 and an outlet B2, and an ion generating unit inside the housing; the ion

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generating unit including a first electrode unit 20 and a detachable second electrode unit 30, and a voltage generator (circuit section E) (see abstract; Figs. 1-6; col. 2, ln. 41-45, 57-59; col. 3, ln. 41-60; col. 4, ln. 50-57).

With respect to the second electrode being removable or how it is removable, Applicants are reminded that the word "removable" does not positively recite the limitation following, therefore the limitation would have no significant patentable weight. Moreover, it has been within the skill in the art that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. See *MPEP 2114*.

### ***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 42-43, 79-82, 84-87 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor alone as applied to claims 34, 40, 59, 66, and 88 above, or further in view of Thompson (US Pat. 5,314,838).

Taylor is as set forth in claims 34, 40, 59, 66, 88 above, and incorporated herein.

In regards to claims 42-43 and 79-82, Taylor differs from the presently claimed invention because the reference does not teach the air inlet vents and the air outlet vents being covered with horizontal louvers.

However, the reference does teach a top portion over the housing with slits over the vents in the ion generating unit 160 (see Figs. 2 and 5). Therefore, one of ordinary skill in the art would reasonably expect the top portion in the reference would be art-recognized equivalence to the louvers as claimed. See *MPEP 2144.06*.

If the top portion of Taylor is not equivalent to the louvers covering the air inlet and air outlet, the reference of Thompson would be used to modify Taylor's invention.

Thompson teaches an air conditioner having air inlet louvers 16 and air outlet louvers 18 (see Fig. 1; col. 3, ln. 8-9). Therefore, it would have been obvious to one of ordinary skill in the art to have modified Taylor's air conditioning system such that it would have included the louvers, as taught by Thompson, for better control of the airflow into the air conditioner and from the air conditioner back into the room.

In regards to claims 84-87 and 94, the Taylor combination does not teach the housing in the shape of a figure eight.

However, applicants have not disclosed the advantages of the housing having a figure eight configuration over any other shapes. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that a particular configuration of the housing would have been a matter of design choice, since the ion generating system would work equally well whether the housing has a figure eight shape or not; and hence would have insignificant patentable weight, absence of persuasive evidence. See *MPEP 2144.04B*.

21. Claims 34-38, 40-, 44-47, 51-56, 60-65, 67-72, 74-77, 84-88, 90-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams as applied to claims 59 and 66 above.

Adams is as set forth in claims 59 and 66 above and incorporated herein.

Adams teaches an air purifier, comprising an elongated and upstanding housing 2, having a top surface, an inlet 20 and an outlet 22; and an ion generating unit positioned in the housing; the ion generating unit includes a first electrode 12, a second electrode 14, and a high voltage generator 17 electrically connected to the two electrodes; wherein the first electrode is closer to the inlet and the second electrode to the outlet (see Figs. 1-3; col. 3, ln. 36 to col. 4, ln. 20).

Adams further teaches a user control 24, or 32, or 34, and a handle 60 on the side (see Fig. 1; col. 4, ln. 21-47).

Although the reference teaches the user control and the handle being on the side of the housing, instead of on the top, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the air purifier of Adams such that the user control and the handle would have been on the top of the housing; because the air purifier would work equally well whether these structures are on the side or the top surface of the air purifier. And moreover, Applicants do not disclose any advantages as to which side of the housing the user control and the handle would be positioned.

Adams further teaches an electrostatic precipitation occurring inside the air purifier (see col. 2, ln. 18-19), with the first electrode being positively charged and the second electrode being negatively charged (see col. 3, ln. 32-33). Therefore, although Adams is silent with respect to the first electrode being an emitter and the second electrode a collector, the reference's electrodes would inherently be an emitter and a collector respectively.

Adams teaches the collector electrode (electrode 14) being wire-shaped (see Fig. 4; col. 3, ln. 64-8). Adams does not teach the collector electrode being hollow or U-shaped.

However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the shape of Adams' electrode such that the electrode would have been hollow or U-shaped, to increase the surface area of the electrode, in order to attract more charged dust particles, and thus enhance air purification. Moreover, it has been within the skill in the art that particular configurations of the electrode would have been a matter of design choice and would not have significant patentable weight, absence of evidence to the contrary. See *MPEP 2144.04, IIIB*.

With respect to the shape of the housing, Adams does not teach a figure eight configuration. However, it has been within the skill in the art that particular configurations of a structure would have been a matter of design choice and would not have significant patentable weight, absence of evidence to the contrary. See *MPEP 2144.04, IIIB*. Moreover, Applicants have not disclosed any advantages of the housing having a figure eight shape over any other shapes. It would be reasonable for one of ordinary skill in the art to expect that the air conditioning system would work equally well whether the housing is a figure eight shaped or otherwise.

In regards to claims 38, 44, Adams teaches the second electrode being elongated along a direction of the elongated housing (see Figs. 1, 3-4; col. 3, ln. 64-68).

22. Claims 42-43, 79-82 rejected under 35 U.S.C. 103(a) as being unpatentable over Adams as applied to claims 34, 40, 59, 66 above, and further in view of Thompson.

Adams is as set forth in 34, 40, 59, and 66 above and incorporated herein.

Adams differs from the instant claims because the reference does not teach the air inlet and the air outlet being covered by louvers.

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Thompson teaches an air conditioner having air inlet louvers 16 and air outlet louvers 18 (see Fig. 1; col. 3, ln. 8-9). Therefore, it would have been obvious to one of ordinary skill in the art to have modified Adams' invention, such that it would have included the louvers covering the air inlet and air outlet, as taught by Thompson, for better control of the airflow into the air conditioner and from the air conditioner back into the room.

23. Claims 99-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams as applied to claims 34, 40, 59, 66, 88 above, and further in view of Lee (US Pat. 4,789,801).

Adams is as set forth in claims 34, 40, 59, 66, 88 above, and incorporated herein.

Adams differs from the instant claims because the reference does not teach the user control for causing the system to be energized, or controlling a duty cycle of the ion generating unit, or control a pulse mode operation, or all three.

Lee teaches an electrokinetic transducing system, comprising circuit 300 which can cause the system to be energized, control a duty cycle of the ion generating unit, and control a pulse mode operation, which in turn control the output of ozone (see Figs. 7, 9; col. 7, ln. 51-64; col. 8, ln. 31-37; col. 13, ln. 15-22).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have included the control system, as taught by Lee, into the apparatus of Adams, for the purpose of controlling the ion generation more effectively, and hence improving the results of the air conditioning.

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***Contact Information***

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 703-306-5698. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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April 17, 2003



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700